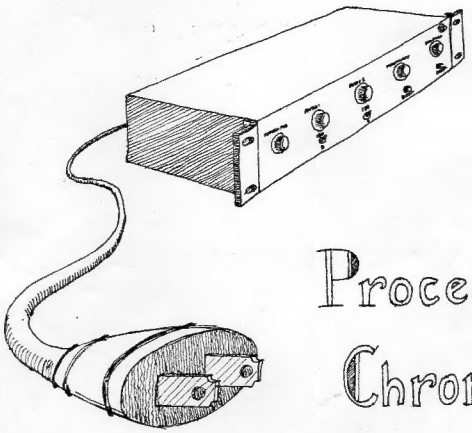


Processing Chrominance Synthesiser

Siegel Video Systems

Processing Chrominance Synthesizer

The P.C.S. synthesizes NTSC colour on any monochrome video signal. Accordingly, any monochrome camera, tape or broadcast signal may be "colourised"

These colours are of course synthetic, and will not correspond to or re-create whatever the original colours were, however it will create many useful and pleasing effects. For example: monochrome cartoons (with a multo step grey scale) may be converted into striking colour. X-ray densities can be converted into colour areas, making detail more prominant. The P.C.S. has also found extensive use in abstract video, providing the brilliant colours so necessary for an effective abstract video piece.

The P.C.S. is different from other colourisers in these respects:

1. The P.C.S. is the only colouriser (of this type) with a U.S. patent. (# 3,647,942)

2. The P.C.S. will give sharp edged colours with no smearing or bleeding. The colours stay within the grey scale confines.

3. The colours are not keyed. they change gradually with the grey tones, smoothly and naturally.

4. Fully regulated power supplies for stable operation.

5. These circuits, in use for over three years, have been the subject of constant improvement - twards ultimate perfection.

6. The unit is constructed with plug in circuit boards, which can be returned for repair or exchange, in case of difficulty.

7. Unlike other colourisers, the P.C.S. is also a processing amplifier, which performs the following functions:

   a. It cleans and re-constructs the the sync pulses to the required .3 volts peak to peak level.

   b. It regenerates field and frame blanking signals (back porch only)

   c. White peak limiter: to prevent over modulation of video tape equipment (max. white level set to .7 volts p-p).

   d. Input level control: to adjust video signals of improper level.

   e. Keyed clamp D.C. restorer: for restoration of the proper black level, and the elimination of low frequency phase shift and hum.

   f. Black level control: for manual adjustment of black level, and colour tone saturation.

   g. Luminance control: allows you to fade the luminance signal while retaining the chroma signal.

h. Detail control: is an adjustible boost of high video frequencies, allowing one to boost resolution or cut noise.

8. The colour synthesizer section of the P.C.S. has the following chroma controls:

a. Chroma level control: for adjustment of colour saturation from zero to one hundred and ten per cent.

b. Chroma modulation control: adjusts the amount of colour modulation and the number of colours present in the picture simultainiously. It has a limit of six simultainious colours.

c. Phase one and two: these are the two controls (with two switches) that adjust colour placement. By setting these controls particular colours can be placed in the desired picture area.

d. Colour trap: the P.C.S. has a colour filter circuit that removes colour information from the incoming video signal. This allows one to re-colourise existant colour video with new colours.

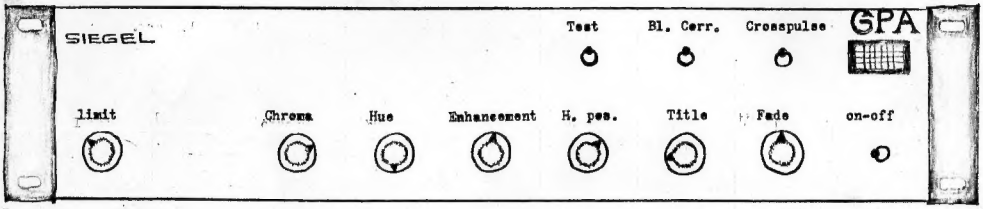
GENLOCK PROCESSING AMPLIFIER

Designed by:

Eric Siegel

Joseph-paul Ferraro

SIEGEL VIDEO SYSTEMS



GENLOCK PROCESSING AMPLIFIER

GENLOCK PROCESSING AMPLIFIER

The G.P.A. is used for correcting electronic errors inherent in ½ and 1 (inch) video systems. It preformes all the necessary functions needed for trouble-free editing.

One reason there is so much difficulty in editing ½ (inch) tape is the fact that the editing machine needs a non-interupted vertical sync pulse to insure that the servo system is locked up. If (in the recording process) there is any interuption of sync due to:

1) Camera cuts
2) tape drop out
3) low sync level
4) abrupt change in video level

on the feed machine, this will cause the servo in the editing machine to lose lock. This results in very poor edits, even on tapes that look good on a monitor.

The G.P.A. is designed to correct all the most prevelent problems encountered in trying to make a finished product of any ½ or 1 (inch) video tape.

Here are the functions the G.P.A. can performe for you.

1). VIDEO TITLING

There is no need for a switcher-fader to add titles to a video tape being edited. The G.P.A. acceptes the Sony CV 2400/AV 3400 camera, (or any other simelar unit) which can be connected directly to a connector on the back. On the front panel is a title control, which allowes one to fade the titles in and out. This is a non-additive video mix.

2). GENLOCKED SYNC REGENERATION

This circuit insures that vertical and horizontal sync pulses (with blanking) are always entering the editing machine. Even if a combleat absense of video should occur, horizontal and vertical sync will remain on frequency and in phase for up to one (1) second.

3). IMAGE ENHANCEMENT

When a scene is converted to a video signal in a normal T.V. camera and is recorded, dubbed, etc., something of the life and sharpness of the picture is lost. However, with the G.P.A. we can electronically manipulate the video signal itself, to restore this obfuscated information.

4). "ARTIFICIAL" BURST INSERTION: This circuit inserts a colour burst flag on the horizontal sync front porch. This feature permits editing between colour and monochrome tapes without colour "lock up" intervals on the VTR or monitor.

5). AUTOMATIC DARK CURRENT BLACK LEVEL RESTORER

Scenes shot with vidicon cameras in low-light situations do not have the proper black level. When watching the playback on a high quality monitor, black is not black, it's grey. This curcuit re-establishes the true black level and gives your tapes a high quality "photographic" look.

6). FIELD 1C RECTORER CLAMP
This curcuit tracks the exact black content in the original video signal and simultaineously corrects most of the electronic distortions that can occur to it, such as power line hum and low frequency phase shift.

7). AUTOMATIC VIDEO LIMITING
This curcuit keeps the video level from going "over the top" When editing raw tape there can be abrupt changes in contrast which send the editing machine into saturation. Bright areas become "washed out" and thus lost. With automatic video limiting, the video signal is always within the proper dynamic range so the VTR can't saturate. Automatic video limiting insures exact grey scale rendition when the GPA is "set-up" properly.
This feature is not to be compared to video automatic gain control circuits .. it will neverbring up the contrast when it shouldn't - it will only lower the "contrast" when the video signal is too high. It will therefore, not introduce any distortion to the brightness content of the signal.

8). WHITE LEVEL TEST
A button is provided which gives a 100% saturation "peak white" test signal, to allow the editing machine to be operated in the manual mode of "video level" operation (instead of using the cheap A.G.C. curcuits built into most ¾ inch VTRs.
To use: press the "peak white" button and adjust the video level control for 100%, (between black and red on meter). No further adjustment of video level is necessary.

9). SYNC LEVEL REGULATOR
This curcuit assures that the sync level will be correct (.25 v p-p) regardless of source.

10). BLANKING REGENERATION
This curcuit provides correct blanking levels and intervals, (to E.I.A. standards) regardless of whether they were correct (or even existed) on the orignal video signal.

11). COLOUR CORRECTION
Allows chroma subcarrier phase to be readjusted so the proper hue may be established.

12). CHROMA LEVEL
Allows one to adjust and correct the chroma level (saturation) in the video.

13). CROSS PULSE OBSERVATION
Permits, at the flip of a switch the cross of the vertical and horizontal sync and blanking (on the [illegible] pre-processed video) to be observed.

14). E.I.A.SYNC
The GPA provides E.I.A. sync, (tech. std. R.S. 170).

ORDERING INFORMATION

Prices: GPa (standard).... ....$2200.

PCS (standard).... ....$1400.

Prices are as of MAR 5 1975

To place an order: We require a 25% non-refundable deposit. Units so ordered will be ready within 6 weeks, (we will notify when ready) and may be shipped or picked up upon reciept of balance.

We do not pay shipping costs.

For further information: Call Joseph-Paul Ferraro or Eric Siegel at (914) 963-8722, or write to:

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70 SARATOGA AVENUE
YONKERS, NEW YORK 10705